

## CLAIMS

1. A portable electronic device (10, 50) comprising:  
means for receiving a rechargeable battery (11);  
means (12, 16) for receiving compatibility data, over a wireless  
communication link (14, 15), from a remotely located battery charger (20,  
30); and  
means for using said compatibility data to detect the presence of a  
battery charger (20, 30) compatible with the portable electronic device.
2. The device of claim 1 in which the means (12, 16) for receiving  
compatibility data comprises a short range wireless device (12).
3. The device of claim 2 in which the short range wireless device (12)  
comprises one of a Bluetooth module, an IEEE 802.11 module, or an infra  
red module, adapted to communicate with an active wireless module (22)  
in the charger (20).
4. The device of claim 2 in which the means (12, 16) for receiving  
compatibility data comprises an RFID transceiver, adapted to  
communicate with a passive wireless device in the charger (42).
5. The device of claim 1 further including an alert device (16, 17, 19)  
for alerting the user of the existence of a detected battery charger.
6. The device of claim 5 in which the alert device (16, 19) is adapted to  
generate an audible output.
7. The device of claim 5 in which the alert device (16, 17) is adapted to  
generate a visual output.
8. The device of claim 5 in which the alert device is adapted to  
generate a vibration output.

9. The device of claim 1 further including a rechargeable battery (11).

10. The device of claim 9 in which the alert device (16) is inhibited when  
5 the charge level of the battery (11) of the portable electronic device is greater than a predetermined amount.

11. The device of claim 9 in which the means (12, 16) for receiving compatibility data is inhibited when the charge level of the battery (11) of  
10 the portable electronic device is greater than a predetermined amount.

12. The device of claim 1 in which the means (12, 16) for receiving compatibility data operates intermittently.

13. The device of claim 1 in which the means (12, 16) for receiving compatibility data operates only in response to a transmission from a compatible remotely located battery charger (20, 30).

14. The device of claim 1 in which the compatibility data includes a  
20 predetermined code sequence indicating compatibility between the charger and the portable electronic device.

15. The device of claim 1 or claim 9 in which the compatibility data includes one or more charge parameter including: battery capacity, battery  
25 chemistry, charging voltage and/or current, charging pattern, interconnection configuration, manufacturer, current status, charge time remaining to availability, charge tariff, charger location.

16. The device of claim 1 in which the portable electronic device (10,  
30 50) is any one of a mobile telephone, a personal digital assistant, a digital camera, a notebook computer system, a personal audio device, a personal video device or a hybrid of any one or more of the above with any other electronic device.

17. The device of claim 5 in which the alert device is adapted to notify the user of the existence of a detected battery charger only upon the existence of further predetermined conditions.

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18. The device of claim 17 in which the further predetermined conditions comprise detecting the presence of the charger for an extended period of time.

10 19. A battery charger (20, 30) for a portable electronic device (10, 50), comprising:

charging means (23, 33) for providing power for recharging a battery (11); and

15 means (22, 32, 42) for transmitting compatibility data, over a wireless communication link (14, 15), to a remotely located portable electronic device.

20. The battery charger of claim 19 further including means (22, 32, 23, 33) for receiving compatibility data from the portable electronic device.

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21. The device of claim 19 in which the means for transmitting compatibility data comprises a short range wireless device (22, 32).

22. The device of claim 20 in which the means for receiving compatibility data comprises a short range wireless device (22, 32).

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23. The device of claim 21 or claim 22 in which the short range wireless device (22, 32) comprises one of a Bluetooth module, an IEEE 802.11 module, or an infra red module, adapted to communicate with an active  
30 wireless device in the portable electronic device.

24. The device of claim 20 further including an alert device for alerting the user of the portable electronic device of the existence of the detected compatible portable electronic device.

5 25. The device of claim 20 in which the alert device is inhibited when the charge level of the battery of the portable electronic device is greater than a predetermined amount.

26. The device of claim 19 in which the means (22, 32) for transmitting  
10 compatibility data operates intermittently.

27. The device of claim 19 or claim 20 in which the compatibility data includes a predetermined code sequence indicating compatibility between the charger and the portable electronic device.

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28. The device of claim 19 or claim 20 in which the compatibility data includes one or more charge parameter including: battery capacity, battery chemistry, charging voltage and/or current, charging pattern, interconnection configuration, manufacturer, current status, charge time  
20 remaining to availability, charge tariff, charger location.

29. A method of automatically establishing the availability of a charging facility for a portable electronic device, comprising the steps of:

25 establishing a short range wireless communication link between a battery charger and a portable electronic device; and

transferring compatibility data over the wireless communication link from the charger to the portable electronic device to determine a compatibility between the battery charger and the portable electronic device.

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30. The method of claim 29 in which the short range wireless communication link uses one of a Bluetooth protocol, an IEEE 802.11 protocol, or an infra red protocol.

31. The method of claim 29 in which the compatibility data is transferred using an RFID transceiver in the portable electronic device, adapted to communicate with a passive wireless device in the charger.

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32. The method of claim 29 further including the step of alerting the user of the portable electronic device of the existence of a detected compatible battery charger.

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33. The method of claim 32 in which the step of alerting is by way of one or more of an audible output, a visual output, or a vibration output.

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34. The method of claim 32 in which the step of alerting is inhibited when the charge level of the battery of the portable electronic device is greater than a predetermined amount.

35. The method of claim 29 in which the step of establishing a short range wireless communication link operates intermittently.

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36. The method of claim 29 in which the step of establishing a short range wireless communication link is initiated by the battery charger.

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37. The method of claim 29 in which the compatibility data includes a predetermined code sequence indicating compatibility between the charger and the portable electronic device.

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38. The method of claim 29 further including the step of transferring compatibility data from the portable electronic device and the battery charger.

39. The method of claim 29 or claim 38 in which the compatibility data includes one or more charge parameter including: battery capacity, battery chemistry, charging voltage, charging pattern, interconnection

configuration, manufacturer, current status, charge time remaining to availability, charge tariff, charger location.